

INCLUSION CLASSROOMS: STUDENTS WITH DISABILITIES INTERACTING WITH INSTRUCTORS AND ABLE-BODIED PEERS

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ABSTRACT

Success in learning hinges on communication between instructors and their students. This success becomes even more important when instructors have students with physical or mental challenges in general classrooms. Communication depends on whether the instructor takes time to listen to a student with a disability who also has a speech impairment. Some instructors are able to help the educational experience go smoothly by paraphrasing what they thought a student with a speech impairment asked or commented on during a classroom discussion. Other instructors may overlook or misinterpret questions or comments posed by their students with speech impairments. Learning in inclusion classrooms also hinges on the interaction between students with disabilities and their able-bodied peers. Both direct and indirect experiences help able-bodied students learn how to help their classmates with disabilities do certain tasks and learn about the specialized equipment their classmates use on a daily basis. Most importantly, students learn that they share common likes and dislikes with their classmates with disabilities.

AUTHOR'S ABSTRACT

This article begins by examining the interaction of instructors and students with physical and mental challenges in inclusion classrooms. Empirical research will provide discussions on different techniques that instructors employ during their interaction with students with disabilities. As a writer who happens to have cerebral palsy and a speech impairment, I will provide the unique point of view of a student with a physi-

cal challenge interacting with instructors and students in the inclusion classroom. My summation will offer suggestions on how to improve interactions between students with disabilities, their instructors, and their able-bodied peers.

INTRODUCTION

The desire to learn is evident when students of all ages and abilities engage in verbal discourse with their peers and their instructors. The level of discussion also increases as questions and comments in high school and college classrooms spawn dialog that, along with the instructor's lecture, enhances the process of learning. Some students are more talkative than others, perhaps because of the student's interest level toward the subject matter or because of how much the instructor engages the students in classroom discussions. In a college classroom, it may be male students who dominate the classroom discussion if they outnumber female students. The dominance of classroom discussion changes when female students outnumber their male classmates. A female majority in the classroom can also change the style of the discussion, as found in the study conducted by Tannen (Coates, 1993). While some male students tend to move from one topic to the next, generally female students tend to analyze a topic more thoroughly by spending more time discussing aspects of one topic. The same genuine concern toward a topic shown in childhood may continue into adulthood for female students. A female majority in a college classroom may use collaborative methods by directing their questions and comments to their fellow classmates as well as to the instructor during the discussion (Coates, 1993).

Whether a classroom has a male majority dominating the discussion or a female majority who uses collaborative methods to engage others in conversation, this makes no difference for a student with a physical challenge who also has a speech impairment. Such a student may have the cognitive ability to participate in classroom discussions, but when it comes to actively speaking in class, the student may opt for silence. A student with a physical challenge and a speech impairment may choose silence to avoid interrupting the fast pace of the class discussion. Another reason for silence may stem from saving the instructor or fellow classmates the task of figuring out the student's speech pattern before arriving at the intended question or comment. Some students with speech impairments choose to wait to talk with their instruc-

tors at the end of class. Graduate student Mitch McKinney (2001) of Metropolitan State College of Denver, who has cerebral palsy, explained to me in an E-mail that he waited until after class before expressing his ideas and thoughts to his instructor. McKinney's instructors took the time to listen to his comments and to answer questions that he wanted to ask during class. McKinney's participation depended greatly on whether his professors, males and females alike, would allow him the time to talk. McKinney (2003) attended classes that averaged 25 students, and he discovered that female classmates spent more time than male classmates in understanding his speech. His impairment, characteristic in persons who have severely involved cerebral palsy, causes him to break up multi-syllable words with a breath. As a way to illustrate this point, double dashes (--) in the following sentence indicate a breath between syllables. If McKinney asks someone "do you understand me?," the listener would hear a muffled and strained "do you un--der--stand me?"

The care and time taken by female classmates to listen and understand McKinney's speech impairment illustrates the collaborative method analyzed by Tannen. From my personal experience in interacting with male and female classmates, female classmates seem more attentive and compassionate than male classmates. In classrooms that also averaged 25 students, female classmates seemed more willing to understand me either by repeating verbatim or by summing up the main points I wanted to make during a classroom lecture. In both cases, the female classmate usually made sure that she understood the intended comment before allowing the classroom discussion, or the professor's lecture, to continue. Similarly, during small group activities where conversations are more intimate, female students tend to show more interest in what their physically challenged classmate has to say than the male students do. In McKinney's case (2001), whether he conversed with one classmate or interacted in a small group activity, he found that female students spent more time than male students in listening, and understanding, his points of view.

During college classroom discussion, both male and female instructors frequently acknowledge when a physically challenged student tries to make a relevant comment. It may take a collaborative effort between the students and the instructor to understand a question or a comment from students with a speech impairment. I will cite my own speech impairment. My voice takes on a higher octave when I try to get people I just met to understand my speech. When I try too hard to speak in class, I tend to drop syllables or sounds to quicken my speech. As a way to illustrate my speech, double dashes (--) indicate a breath between a syllable, and a single dash (-) indicates a

dropped sound. My speech impairment particularly became noticeable at the beginning of each semester at the University of Colorado at Denver. When I introduced myself, for example, I intended to say, "My name is Daniel Gelston, and I am a senior working on my Bachelor Degree, and my major is English." What the listener in the class may hear might be, "My na--me i-Dan--iel Gel--ston, an- I am a Sen--ior wor--kin- on my Bache--lor Degree, an- my major i--s English." After a few weeks of classroom interaction, most college instructors become familiar with the speech patterns of the physically challenged student enough that they can answer a question or comment without having to ask the students to repeat him or herself. From personal experiences, I have found that once a student knows that the instructor understands the speech pattern, the more "relaxed," and therefore more comprehensible, the physically challenged student's speech becomes.

Female instructors more than their male colleagues tend to actually walk over to the student with the physical challenge, and focus their entire attention on the posed question or comment. In case some of the other students did not hear the question or comment, a female instructor usually will paraphrase what she thought she heard before addressing the question or comment. Male instructors tend to proceed to answer or address the comment without confirming what the student intended to ask or say. Regardless of whether male or female students with speech impairments pose a question or offer a comment, the rules of the dominance theory may apply. The dominating qualities that some male instructors demonstrate to control classroom discussions might cause some students to remain quiet. It becomes the responsibility of the student with the speech impairment to choose whether he or she wants to repeat the question or let it go unanswered. Zimmerman and West studied the rules of conversation, and defined interruptions as violating the rules of turn taking between two or more people (Coates, 1993). Students with speech impairments may have to use interruptions, not as a way of being disrespectful toward their instructors, but as a way of ensuring that they receive correct responses to their questions and comments. Speech impairments do not need to prevent students with physical challenges from participating in classroom discussions, which are an important element in learning.

DISCUSSION OF A CLASSROOM OBSERVATION

Before students with physical and mental challenges become involved in classroom discussions, some students become accustomed to classroom speaking in previous classes specifically geared for instructor/student interaction. I

base this statement on personal experiences and observations of how fellow classmates interacted with their instructors in special education. In support of this claim, I returned to visit my childhood school, Fletcher Miller, a school specifically geared to teach students from kindergarten to twelfth grade with physical and mental challenges. My observation took place in a reading class where the instructor interacted with the students as they read a book aloud. The instructor praised the way a student read, or helped a student sound out a word in Standard English. As a non-participant observer, I listened as the students read a chapter of E. B. White's *Charlotte's Web*. The population of the class usually consisted of six male students ranging in age from twelve to sixteen, their male instructor, and a female instructor's assistant.

The one-gender classroom at Fletcher Miller created the environment conducive to learning for adolescent male students who may act differently around their female classmates. The day of this observation, the four students who were present read and listened to the chapter leading up to Wilbur winning the competition for the best pig of the county. Of the four students, two had normal speech, one had a slight speech impairment, and one student lacked entirely the ability to speak. For the latter student, the instructor asked him yes- and no-type questions to ensure that he understood the main points in the chapter. By using his eyes to communicate, the student "said" yes by looking up; in response to "no" questions, his eyes would look downward. Whenever this student had a question for the instructor, he would use a chin lever attached to his neck support on his wheelchair to ring a bell that his classmates affectionately called, and melodically sounded like, his "whazzuh" bell!

Since this reading class took place in a school for students with special needs, the four students consider themselves as equals. Indeed, whenever a student came across an illustration in *Charlotte's Web*, he voluntarily held up the book so that the student who attentively listened to the book could see the picture. Perhaps by having daily contact with the student who has the slight speech impairment in other classes, his classmates listening to him read are able to overlook the way he announces words, and focused their attention on the chapter. The intimate size of the class also is a key to the success of the reading class by allowing the instructor to give his students individualized attention to ensure that they enjoy the process of learning. Once students with physical and mental challenges enter inclusion classrooms, they are less likely to receive such individualized attention and their participation may drop. Reasons for the student's behavior could be the large classroom size

or that they are less likely to participate in classroom discussions and/or activities for fear of bringing attention to the way they sound in class.

The three male students who did read shared the common learning experience of sounding out words throughout the chapter. Each student took turns reading two or three pages during the forty-minute class period. When a student did not know how to pronounce a word, the instructor would not say the word for the student, but give a synonymous definition for the word. For example, when one student had trouble pronouncing 'surroundings,' the instructor would ask him, "What is the setting around you?" Similarly, if the second student mispronounced a word, the instructor guided him at arriving at the proper pronunciation. When the student came across the word 'crowd' and mispronounced the word by saying 'crowded,' the instructor tells him that he "pronounced the first part correctly; now just drop the 'ed' ending." By giving hints to pronounce words correctly in both cases, the instructor directly influences how his students pronounced the written word in Standard English. Having students read aloud also helps them to build their confidence in speaking in a small group. During his turn to read, the third student sometimes displayed his frustration when he tried to read aloud since his speech impairment muffles his words. The instructor helped to diminish the frustration by repeating and clarifying some of the things the student wanted to say. Even when this student mispronounced a word or a sentence, the instructor encouraged him to continue to read the rest of the page.

STUDENTS WITH DISABILITIES IN INCLUSION CLASSROOMS

Students with physical and mental challenges who have the cognitive competence to enter inclusion classrooms may face instructors ill prepared to handle their students' various needs. Betancourt-Smith (1994) surveyed 59 high school instructors who taught, or were in the process of teaching, students with learning disabilities. This survey did not specify the students' level of learning disabilities that instructors encountered on a daily basis. The instructors answered questions ranging from strategies for teaching and accommodations they deemed reasonable or unreasonable to special problems their students with learning disabilities had in class. A majority of the respondents replied they learned how to accommodate through the experience of teaching although they lacked the training in the area of special education. Other instructors indicated that they did not feel adequately prepared when they entered the teaching profession to teach students with learning disabilities. These responses may help to explain why some students with

physical or mental challenges in inclusion classrooms do not partake in discussions or in-class activities.

Monahan, Marino, and Miller (1996) conducted a study that evaluated 364 teachers' attitudes toward classroom inclusion. Out of the 342 who responded, 45% disagreed that regular classroom teachers had the instructional background to teach students with special needs. This same percentage of general classroom teachers agreed to the idea of sending students back to special education teachers where students received the services in special education classrooms. From personal experience, integrating students into regular classrooms gives them the advantage of learning a subject more thoroughly than in special education classrooms. My instructors had to tailor the subject matter they taught in special education classrooms toward students with mental challenges if they lectured to the entire class. The same situation occurred in the general classrooms whose population included students with and without disabilities. In my pre-Algebra high school class, the instructors kept the level of teaching down to accommodate students who had learning disabilities. Similarly, special education instructors who could no longer accommodate students with disabilities who have the cognitive ability for advanced learning often encouraged them to take classes in general classrooms. While special education instructors are capable of teaching their higher advanced students on an individualized level, the curriculum at Fletcher Miller in the early 1980's combined students with physical and mental challenges in the same classroom. For instructors, teaching students with physical and mental challenges in the same classroom entailed planning what they taught to include the entire class in learning the subject matter. From personal experience, this often meant retaking courses since most of my classmates had various levels of learning disabilities.

Learning alongside students without disabilities helps to prepare their peers with disabilities for the opportunity to obtain a college or a university degree. Students with disabilities who attend classes in inclusion classrooms can experience a preview of expectations in colleges or universities classrooms by participating in group activities with their able-bodied peers and completing homework assignments. At the same time, being educated in secondary inclusion classrooms is not a prerequisite for students with disabilities to attend classes in colleges or universities. Some students with disabilities who stay in special education schools may seek a higher education. Students may opt to stay in special education schools because they do not feel they can interact with an instructor in the inclusion classroom at the secondary level. A second reason may be that a student needs specialized care, such as maintenance of a ventilator, and general schools are out of compliance with

Section 504 of the Rehabilitation Act of 1973 if they do not provide a qualified ventilator technician to monitor the student's ventilator. All students with disabilities who have the cognitive ability to obtain a college education can receive assistance through disability service offices provided by colleges and universities. Acting as a liaison between a student with a diagnosed disability and the college/university instructor, a counselor in a disability service office can help with modifying classroom assignments. Students can schedule their courses so they are on campus for three hours two or three days a week, instead of six hours per day they spend in elementary and secondary education.

A third reason why students with disabilities attend college without prior experience in inclusion classrooms has to do with the student's age. Ever since the passage of Public Law 94-142: The Education of All Handicapped Act of 1975, children with disabilities between the age of three and twenty-one have the right to a free public education in the least restrictive environment. This law opened the doors for students in special education to have the opportunity to transfer to inclusion classrooms and continue their education alongside students without disabilities. Before Public Law 94-142, some students in special education did not have this opportunity. Paul (2000) cited a study before 1975 that showed out of eight million children from birth to 21 years old with disabilities, only half received an appropriate education, while 2.5 million received inappropriate education. According to the study, another 1.75 million children with severe disabilities received no education (Finn et al, 2001). Similarly, some colleges and universities denied admission to students with disabilities who had the cognition to obtain a higher education because of various physical limitations. A study in 1962 (Paul, 2000) showed that out of 92 colleges and universities in the Midwest, 65 institutions would not accept students who used wheelchairs. Continuing his analysis, Paul cited another study in 1974 that discovered out of the 1000 four-year institutions reviewing applicants with disabilities, 18% rejected blind applicants, 27% rejected applicants in wheelchairs, and 22% rejected deaf applicants. Students with physical challenges who had high grade point averages or who scored well on the SATs were not automatically eligible to enter institutions for higher education. Before the passage of Public Law 94-142 and, much later, the Americans with Disabilities Act of 1990, institutions for higher education were under no obligation to provide disabilities service offices. In addition, institutions of higher education did not have to make their campus wheelchair accessible until the provisions stipulated in Section 504 of the Rehabilitation Act of 1973 that required institutions to become accessible.

The passage of Section 504 of the Rehabilitation Act, amended in 1974, changed the outlook for students with disabilities in obtaining a higher education. This provision became the first significant piece of federal legislation allocating funds to help students with disabilities go to colleges and universities. Section 504 also places the responsibility on higher education to provide an equal educational opportunity for qualified individuals with disabilities, and to impose an affirmative action obligation for colleges and universities (Kaplan, 1985). The third major legislation affecting pursuit for an education by persons with disabilities came with the Americans with Disabilities Act (ADA) of 1990. Part of this legislation prohibits the discrimination of persons with disabilities from seeking and accessing employment, public accommodations, public service, transportation, and telecommunications. The ADA affects colleges and universities since they are public sites, and must accommodate students of all abilities.

Whether learning occurs in elementary, secondary, or in higher education, all instructors have the goal of including their students as participants in classroom activities. In some classrooms whose population includes students with physical and mental challenges, the instructor tries to treat them as normally as possible by dispersing their seating assignments among their fellow classmates without disabilities. The instructor also encourages them to participate in all activities and use the same learning materials that the other students use. Just because students with mental or physical challenges may have the cognitive ability to integrate into inclusion classrooms does not mean that they will seek higher education at a college or a university. There are some students without disabilities who seek employment rather than continuing with higher education. Upon receiving their high school diploma, students with physical and mental challenges may follow suit by looking for employment.

In other inclusion classroom settings, students with mental challenges sit in during classroom activities, but they may not participate as much as the other students. While most instructors want to help their students to learn, part of the mentally challenged student's lack of participation might be the result of the instructor's lack of preparedness to teach the student (McIntosh et al., 1993). In social studies, science or vocational classes, students with mental challenges often gather in small groups or participate in whole class activities or assignments along with their fellow classmate. An example of preparedness occurs in a vocational class. In this setting, the instructor accommodates the student with the mental challenge by walking over to the student, and rereading or restating the question if the student shows signs of hesitation (Betancourt-Smith, 1994). The instructor would proceed to

restate the question to the other students as a way of ensuring that they also understood the question and as a way of eliminating the appearance of favoritism. Communication between instructors and students with physical or mental challenges also plays a significant role in the process of learning. Zimmermann, Dawson and Spano (1994) cite a study at San José State University where they distributed a survey to its 967 physically challenged students registered with the Disabled Student Services. The study showed that out of the 108 respondents, 74 female and 33 male students, nearly 72% viewed their communication with their instructors as positive. When the students answered the question centering on the issue of discrimination by the instructor, 40% indicated they never experienced discrimination while 54% said that they "sometime" or "infrequently" experienced discrimination. A low percentage, 5%, of the students indicated they "often" experienced discrimination by their instructors (Zimmermann et al, 1994).

In social studies or science classes where students with mental challenges pair with other students in small groups, part of the monitoring involves checking the students' progress, and asking the student to explain the assigned task. Interaction between the instructor and the student with a mental challenge becomes difficult when the student does not readily volunteer comments or request the instructor's assistance (McIntosh et al, 1993). The reasons for the student's low participation might hinge on being self-conscious over a possible speech impairment or on the incapacity to do the in-class assignments. The difficulty of the subject matter combined with the probable rapid pace of their fellow classmates becomes a third reason for the student's low participation in the classroom.

Students with mental challenges have a better opportunity to learn when the instructor tailors the course to satisfy the needs of every student. When instructors make plans for their class, they pay special attention to each of the students in the classroom, not just the students with mental challenges. When instructors plan for a particular course, they prepare for whole-class and individualized activities to meet the diverse needs of every student (Schumm et al, 1995). The individualized activities may be beneficial for the student with the mental challenge because the instructor may have more time to answer questions or help the student with the specified assignment. The one-on-one attention would benefit another student who has a speech impairment since this self-consciousness can prevent active participation in classroom discussions. Tutoring, as suggested by an instructor to students who need more help with assignments, may be a viable option if a student with a mental challenge enters higher education, but who still needs the one on one attention.

Working with the student who has a mental challenge on an individualistic level may also help the student to become an active learner and a participant in classroom discussions. While the one-on-one attention helps the student to understand the activity or assignment, the simple fact is that communication occurs between the instructor and the student. Regardless of whether or not the student has a speech impairment, communicating with the instructor on a one-on-one basis tends to raise the student's level of self-confidence to communicate with other students in the classroom. By contrast, the student with a mental challenge who enters into inclusion social studies or science classes tends to become an inactive learner simply because the student does not request assistance or volunteer answers (McIntosh et al., 1993). Such a student might have the mental capacity to understand classroom activities, but may choose silence to avoid demonstrating a perceived sense of confusion.

I know from personal experiences that a student with a disability may have questions to ask or comments to make during class, but remains quiet because it may take the student too long to formulate thoughts into words. By the time a student mentally rehearses the question or comment so it would sound coherent, especially if the student has a speech impairment, the instructor might be on a totally different line of discussion. When a student does attempt to speak in class, and the question or comment comes out incoherently, the instructor, lacking the training necessary to teach students with physical or mental challenges, may demonstrate impatience. The instructor may try answering a question before the student finishes the inquiry, or may respond to a comment without repeating what the student said to make sure the comment was heard correctly. In either case, disregarding what the student wants to say interrupts the communicative process between the instructor and the mentally or physically challenged student; this process is a necessary element in the act of learning.

INTERACTION BETWEEN STUDENTS WITH DISABILITIES AND THEIR ABLE-BODIED PEERS

The successful learning of students who have physical or mental challenges also depends on whether their able-bodied peers recognize them as equals in inclusion classrooms. Many students with disabilities have successfully integrated into inclusion classrooms based on their cognitive level, or their ability to keep up with their classmates on an academic level. This does not ignore the fact that other students may be thinking about the intelligence of a classmate as they watch a student roll his or her wheelchair into class or

hear the broken speech in class. Simultaneously, the student with the disability may have thoughts of whether the able-bodied classmates will accept someone in a wheelchair or the way he or she may sound in class. Not knowing how other students will react toward the student with a disability can also contribute to the non-participation in classroom discussion and/or group activities. Most often, the problem resolves itself once students with disabilities have the opportunity and time to demonstrate that they can ask questions or offer comments relevant to the course matter.

The journey toward taking classes in inclusion classrooms for some students with physical or mental challenges often starts in kindergarten. At an age when children without disabilities begin to formulate opinions about people that they meet, the kindergarten classroom becomes an appropriate environment for interacting with students with disabilities. A child who sees someone in a wheelchair may wonder why the person can not walk, and worry that something might be wrong with the person's legs. Similarly, if a child hears the person speak with a speech impairment, then thoughts might run the gambit from the person "talks funny" to the person "thinks funny." Such thoughts that can mature into negative attitudes later in life are reversible if students are able to interact with their physically or mentally challenged peers in a classroom environment. This kind of interaction can be a positive experience especially during kindergarten when children are able to overlook a classmate's disability after forming a sense of camaraderie. Even if a student with a disability has a speech impairment, this becomes a moot issue since most students tend to understand a classmate's speech pattern more readily than do some instructors.

Instructors in kindergarten begin the process of promoting positive attitudes in their students toward other children with disabilities. Favazza and Odom (1997) showed that this process starts with setting up varying environments of direct experience and indirect experience. Direct experience entails actual interaction in the classroom where children participate in structured free-play activities with their classmates with disabilities. Having children with and without disabilities play together in a structured environment encourages positive interaction especially when play involves toys and social activities that spawn social interaction (Favazza & Odom, 1997). An example of teamwork occurs as when a child pairs with a disabled child to work on a computer counting or spelling game. If a child has cerebral palsy and lacks fine motor control, then the companion without a disability can become the "fingers," and press the appropriate keys on the keyboard. The classmate with cerebral palsy can reciprocate by helping the other classmate to spell a word or to solve a mathematical problem. Another example of

teamwork between children with and without disabilities occurs during a game of rolling a ball on the table. In a small group of six children, three children team with three children who have physical challenges. If a child with a physical challenge lacks the arm movement to push the ball across the table, the teammate can help roll the ball to the next team. Likewise, if a child has spastic movements that cause the ball to launch off the table and career across the room, the teammate can retrieve the errantly aimed ball.

Direct experiences not only involve cooperative play between kindergarten children with and without disabilities, but also between older children and their peers who have physical and mental challenges. Types of activities that involve cooperation between two or more students take place in art or cooking classes where instructors encourage students to share materials to accomplish the assigned task. Sharing materials also encourages students to take turns completing a task. In a cooking class where the students make popcorn balls, the student without the disability can act as the mediator to explain what they need to do (Eichinger, 1990). After the explanation, the student with the disability might be able to help with the sticky process of mixing the ingredients to make popcorn balls, but lacks the fine motor control to form the popcorn into a sphere. Cooperation continues when the student without the disability helps the partner by physically controlling their partner's hands to form the popcorn ball. The student with the disability may also place his or her hands on the other student's arm to feel the sensation of forming the popcorn ball.

Even before students meet students with disabilities, indirect experiences give the students a chance to learn about various disabilities. Indirect experiences include activities where students discuss and learn what it would be like to have a classmate with a physical or mental challenge in the classroom. Such activities involve, but are not limited to, storytelling tasks and discussions about the special equipment such as wheelchairs and communication boards that students with disabilities may use. Innes (1999) found that storytelling tasks in one indirect experience setting may focus on ways that volunteering mothers can talk to their preschool age sons or daughters about children who have physical challenges or about children with Down Syndrome. During their discussions, mothers talked to their sons and daughters more about children with physical challenges than about children with Down Syndrome. Most children had questions about their classmates with physical challenges because they need reassurance that children sitting in a wheelchair or walking with crutches did not hurt themselves. Young children had fewer questions about their classmates with Down Syndrome because signs of mental challenges are not as apparent as the child's inability to walk.

Depending on the child's age and level of cognition, explaining that the children using wheelchairs or crutches need them for their means of getting around temporarily satisfies a young mind's curiosity. For older children, discussing physical disabilities and their effects helps them to understand what their classmates experience on a daily basis. Children discover that their classmates with disabilities often have common interests, and can build their friendships on common likes and dislikes.

Indirect experience may involve talking about special pieces of equipment that students with disabilities may use. When students hear stories about children using wheelchairs, the instructor asks students to describe different parts of the wheelchair (Favazza & Odom, 1997) such as the brakes, foot peddles, and seatbelts. In a story where a child uses a communication board, the classroom discussion might focus on reasons that someone uses a communication board. As a part of the lesson, students may ride in a wheelchair or to try "communicating" with other classmates on a communication board. This kind of exploration allows students to experience, and appreciate, adaptations of their classmates.

Indirect experience may include discussing additional diagnostic information about students with rare disabilities. Though indirect experience usually occurs in general classrooms where students learn about their future classmates with disabilities, it can occur in special education classrooms as well. As a student at Fletcher Miller in the early 1980's, I remember an instructor preparing us for two children who would join our class. One student had Osteogenesis Imperfecta, or brittle bone disease, and the other student had Lesh-Nyhan Syndrome, a condition where a person self-abuses himself or herself (Bleck & Nagel, 1982). We learned that the student with Osteogenesis Imperfecta had to lie on his back on a raised prone board because the bones were too brittle to support his body weight. As fellow classmates, we needed to ensure that nobody intentionally or unintentionally hurt him. Likewise, we learned that the student with Lesh-Nyhan Syndrome had to keep his hands tied behind him because of his tendency to bite his fingers, one example of self-abusive behavior.

Students who learn alongside students with physical and mental disabilities have the opportunity to learn more than what academia can officially offer; this environment increases tolerance and acceptance of students with different abilities. Methods learned during direct experience can help students without disabilities recognize when they can appropriately lend a helping hand or modify their play to accommodate their classmates with disabilities. Likewise, information learned during indirect experience leads students to appreciate the specialized equipment such as wheelchairs and

communication boards that their classmates use for their mobility or to communicate. Information gathered about a student's particular disability during classroom discussions, both in general and special education classrooms, gives students without disabilities a better appreciation of what their peers with disabilities experience on a daily basis. Students with and without disabilities go to class with the intent of learning. Lessons learned during direct and indirect experiences raise awareness about disabilities, and guides students to accept their classmates with disabilities as fellow peers. For students with disabilities, gaining acceptance from their peers in the inclusion classroom shifts the attention from a student's wheelchair and how another student's speech may sound to the contribution they make in classroom discussions and activities.

RECOMMENDATIONS TO PROMOTE INTERACTION

The following recommendations enhance inclusion classroom interaction between students with disabilities and their instructors and able-bodied peers:

- Adopt the practice of instructors walking over and listening to their student with a speech impairment. Repeating or paraphrasing the student's questions or comments ensures that the instructor, and classmates, heard the student correctly before answering the question or addressing the comment.
- Encourage direct experience in inclusion classrooms by pairing students with disabilities with their able-bodied peers in controlled play activities or working together on a project. Working together can teach students without disabilities how to overlook their peer's physical or mental disabilities to complete a project. Students with disabilities learn as well that most of their able-bodied peers are willing to lend a helping hand if they are physically unable to complete a task.
- Engage students in indirect experience activities and discussions to learn about individuals with disabilities. Activities like exploring the different parts of a wheelchair or "communicating" with each other using a communication board may help students appreciate what their future classmate experience on a daily basis. Indirect experience with students also includes discussions with students about their future classmate's specific disability. These discussions can help students without disabilities understand why future classmates might sit, or lay, in certain ways or why their classmate's disabilities cause them to behave in certain ways.

SUMMARY

The interaction between instructors and their students with speech impairments depends on the methods an instructor employs to facilitate the inclusion of students with disabilities in classroom discussions. Some instructors communicate during class with students who have speech impairments while other instructors take time after class to listen and answer questions posed by the student. Instructors who walk over and paraphrase questions or comments posed by students with speech impairments can improve communication in the classrooms of primary, secondary, or higher education even if instructors lack training in special education.

The success of students in the inclusion classroom also depends on their interactions with students without disabilities. Helping students to accept their classmates with disabilities starts with the promotion of positive behaviors during direct experience and indirect experience. Direct experience entails the interaction between children with and without disabilities and their participation in structured activities where students can help each other learn. Indirect experiences during classroom discussions allow students to learn about individuals with disabilities, and about the specialized equipment that they use. The discussions can also provide information about other disabilities such as Osteogenesis Imperfecta and Lesh-Nyhan Syndrome. The most important lesson students can learn about their classmates with disabilities does not necessarily occur during direct or indirect experiences. Students often learn that classmates with disabilities share common interests, likes, dislikes and, for some, the aspiration of seeking a university degree.

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